



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,247	10/09/2001	Hiroyuki Konno	KIK01 P323	5330
7590	05/04/2005			EXAMINER NGUYEN, SANG H
HIROYUKI KONNO 695 Kenmoor, S.E. Post Office Box 2567 Grand Rapids, MI 49501			ART UNIT 2877	PAPER NUMBER

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/973,247	KONNO, HIROYUKI	
	Examiner	Art Unit	
	Sang Nguyen	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 October 2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-7 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/03/02</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) filed on 09/03/02 has been entered.

Accordingly, the information disclosure statement is being considered by the examiner.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-7 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-7 of copending Application No. 10/737,336. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2877

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiyoshi (JP07110216, English translation) in view of Cuche et al (U.S. Patent No. 6,262,818) and Miyagawa (U.S. Patent No. 3,739,697).

Regarding claims 1-4 and 7; Hiyoshi teaches a method and apparatus for direct image pick-up of a particular granular speck pattern generated by reflecting light of a laser beam depending on a degree of roughness of the surface of an object to be inspected (see Abstract, Fig. 1., sections 0002, 0006 and 0007), comprising: irradiating said object to be inspected with the laser beam (sections 0009 and 0012), directly picking up said granular speck pattern in a relatively well-lighted environment using a lensless camera having a CCD (Charge Coupled Device) element incorporated in said camera (Fig. 1., sections 0006, 0007, 0012, 0015, 0016 and 0018).

Hiyoshi further teaches a method and apparatus for direct image pick-up of a particular granular speck pattern generated by the transmitted light of a laser beam diffusively reflecting depending on a degree of roughness of the laser beam irradiated onto the surface of an object to be inspected or shapes of fine ingredients constituting said object to be inspected (see Abstract, Fig. 1., sections 0002, 0006 and 0007), comprising the steps of: irradiating said object to be inspected with the laser beam (sections 0009 and 0012), and directly picking up said granular speck pattern in a relatively well lighted environment using a lensless camera having a CCD element incorporated in said camera (Fig. 1', sections 0006, 0007, 0012, 0015, 0016 and 0018).

The teaching of Hiyoshi further includes: measuring an amount which the object

Art Unit: 2877

has moved (sections 0012 and 0022), calculating the amount of movement on the basis of movement of the granular speck pattern with respect to an index of the granular speck pattern (sections 0018 and 0031), and displaying a result of the calculation as a numerical value of the measured amount of movement (sections 0012 and 0022), an A/D converter coupled to said camera to convert an analog signal supplied from said camera to a digital signal (sections 0013, 0016 and 0018), a processing unit coupled to the A/D converter to calculate the amount of movement of said object on the basis of movement of the granular speck in said pattern with respect to a pixel interval of said granular speck pattern picked up by said camera and represented by said A/D converted signal (sections 0007, 0016, 0018 and 0022), and a display coupled to said processing unit to display the amount of movement calculated by said processing unit (Fig. 1., sections 0018 and 0023), and an electrical circuit coupled to said camera for calculating the amount of movement of said object on the basis of movement of the granular speck in said pattern with respect to a pixel interval of said granular speck pattern picked up by said camera and displaying the amount of movement calculated by said electrical circuit (Fig. 1., sections 0007, 0016, 0018 and 0022 and 0023).

Hiyoshi does not mention that: said camera is a video camera, and providing a shielding tube coupled to said camera to shield extraneous light rays.

Cuche et al. teach a method of picking up image pattern in a relatively well lighted environment using a lensless video camera having a CCD (col. 11 lines 40-57; col. 24 lines 58-67; and col. 25 line 25).

It would have been obvious to one having ordinary skill in the art at the time the

Art Unit: 2877

invention was made to include the teaching of Cuche et al. in the Hiyoshi system in order to build a computed video animation and/or in order to measure a deformation of the object and/or a movement of the object and/or a modification of the optical properties of the object (Cuche et al., col. 25 lines 61-67 and col. 26 lines 1-4).

Miyagawa discloses a data recording device for use with cameras, comprising a shielding tube coupled to the camera to shield extraneous light rays (col.3 lines 14-37 and col.4 lines 4-14)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Miyagawa in the Hiyoshi system in order to prevent extraneous light from entering into the light shielding tube so that no noise light would interfere the signal light in detecting the target (Miyagawa, col. 3 lines 14-37 and col. 4 lines 4-14).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiyoshi (JP07110216, English translation) in view of Cuche et al (U.S. Patent No. 6,262,818) and Miyagawa (U.S. Patent No. 3,739,697).

Regarding claims 5 and 6; Hiyoshi further teaches a method and apparatus for direct image pick-up of a particular granular speck pattern generated by the transmitted light of a laser beam diffusively reflecting depending on a degree of roughness of the laser beam irradiated onto the surface of an object to be inspected or shapes of fine ingredients constituting said object to be inspected (see Abstract, Fig. 1, sections 0002, 0006 and 0007), comprising the steps of: irradiating said object to be inspected with the

Art Unit: 2877

laser beam (sections 0009 and 0012), directly picking up said granular speck pattern in a relatively well lighted environment using a lensless camera having a CCD element incorporated in said camera (Fig. 1., sections 0006, 0007, 0012, 0015, 0016 and 0018).

Hiyoshi does not mention that: said camera is a digital camera, providing a shielding tube coupled to said camera to shield extraneous light rays.

Cuche et al. teach a method of picking up image pattern in a relatively well lighted environment using a lensless digital camera (col. 11 lines 40-57; col. 24 lines 58-67; and col. 25 lines 25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Cuche et al. in the Hiyoshi system in order to build a computed video animation and/or in order to measure a deformation of the object and/or a movement of the object and/or a modification of the optical properties of the object (Cuche et al., col. 25, lines 61-67 and col. 26, lines 1-4).

Miyagawa discloses a data recording device for use with cameras, comprising a shielding tube coupled to said camera to shield extraneous light rays (col. 3, lines 14-37 and col. 4, lines 4-14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Miyagawa in the Hiyoshi system in order to prevent extraneous light from entering into the light shielding tube so that no noise light would interfere the signal light in detecting the target (Miyagawa, col. 3 lines 14-37 and col. 4 lines 4-14).

Art Unit: 2877

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kobayashi (US 6847910) discloses method and apparatus to measure amount of movement using granular speck pattern; Itakura (US 5694480) discloses molten slag flow rate measuring device; Hiyoshi Toshio (JP 09 049706) discloses method for measuring moving amount of object to be measured; Hasegawa et al (JP 2000-149087) discloses lot management method utilizing speckled pattern of reflected laser beam; or Hasuike (JP 05 143717) discloses grain pattern measuring method..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

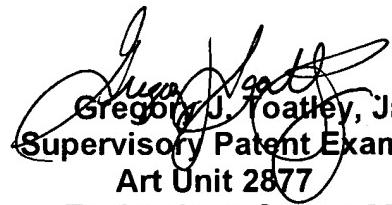
Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SN

Sang Nguyen/SN

April 26, 2005


Gregory J. Roatley, Jr.
Supervisory Patent Examiner
Art Unit 2877
Technology Center 2800
27Apr05